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WOODS ROGERS
ATTORNEYS AT LAW

JOHN K. BYRUM, JR.
(804) 343-5027
jbyrum@woodsrogers.com

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August 24, 2017

VIA HAND DELIVERY

Joel H. Peck, Clerk
Virginia State Corporation Commission
Document Control Center
1300 East Main Street, First Floor
Richmond, Virginia 23219

Re: Application of Chickahominy Power, LLC for a Certificate of Public Convenience and Necessity to Construct and Operate an Electric Generating Facility in Charles City County Pursuant to Va. Code § 56-580 D
Case No. PUR-2017-00033

Amended Application, Amended Exhibit 1: Responses to 20 VAC 5-302-20

Dear Mr. Peck:

On behalf of applicant Chickahominy Power, LLC ("CPLLC" or the "Company"), please accept for filing the Company's Amended Application for a Certificate of Public Convenience and Necessity to Construct and Operate an Electric Generating Facility in Charles City County pursuant to Va. Code § 56-580 D ("Application") and accompanying amended information required by 20 VAC 5-302-20 ("Exhibit 1").

On March 13, 2017, CPLLC filed its initial Application and supporting materials, including Exhibit 1, and served the Application and materials on Commission Staff and the Virginia Department of Environmental Quality ("DEQ"). In the course of Staff's review of the Application pursuant to 5 VAC 5-20-160, DEQ required CPLLC to conduct an additional Environmental Assessment of the proposed Facility and, on August 16, 2017, CPLLC filed supplemental Exhibit 5, a July 2017 Environmental Assessment of the Project Site prepared by Angler Environmental ("July 2017 EA"). Because this July 2017 EA substantively differs from the Environmental Assessment filed with the initial Application, the text of the Application and Exhibit 1 are in certain respects incorrect as filed. Accordingly, CPLLC files the enclosed amended Application and amended Exhibit 1 to conform these documents to the recently-submitted July 2017 EA.

Pursuant to Rules 5 VAC 5-20-150 and 5 VAC 5-20-170 of the Commission's Rules of Practice and Procedure, CPLLC files an original and fifteen (15) copies of the confidential versions of the Amended Application and Amended Exhibit 1, marked "**CONFIDENTIAL**" and submitted ***under seal***. The Company also files an original and one (1) copy of the redacted or expurgated public versions of the Amended Application and Amended Exhibit 1, as required by

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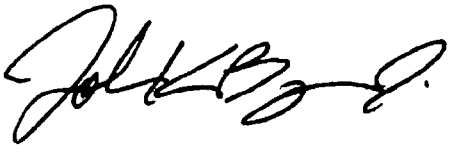
5 VAC 5-20-170. The Company filed a Motion for Protective Order and proposed Protective Order on March 13, 2017, which Motion is pending decision. Accordingly, the Company serves the confidential versions of the Amended Application and Amended Exhibit 1 on Staff and DEQ pursuant to the protection of such information provided by paragraph 1 of Rule 5 VAC 5-20-170.

Should you have any questions concerning this matter, please feel free to contact me at the above number. Thank you for your assistance.

Sincerely,

WOODS ROGERS PLC



John K. Byrum, Jr.

JKB:kc
Enclosures

cc: Service List
John E. Fisher
Julia Wellman
Irfan K. Ali
Bruce A. Reese

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COMMONWEALTH OF VIRGINIA

STATE CORPORATION COMMISSION

APPLICATION OF	)	
	)	
CHICKAHOMINY POWER, LLC	)	
	)	**CASE NO. PUR-2017-00033**
For a Certificate of Public Convenience and Necessity to Construct and Operate an Electric Generating Facility in Charles City County Pursuant to Va. Code § 56-580 D	)	

APPLICATION FOR CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY

Pursuant to Va. Code § 56-580 D, Rules 20 VAC 5-302-10, *et seq.* of the Virginia Administrative Code, and Rule 80 A (5 VAC 5-20-80 A) of the Commission's Rules of Practice and Procedure, applicant Chickahominy Power, LLC ("CPLLC" or "Company"), by counsel, hereby files this application ("Application") for a certificate of public convenience and necessity ("CPCN" or "Certificate") to construct and operate a combined cycle electrical generating station (the "Facility") with a net nominal generating capacity of 1,650 megawatts ("MW") located in Charles City County, Virginia.

In support of its Application, Chickahominy Power states the following:

INTRODUCTION

CPLLC has retained Balico, LLC ("Balico") – a company whose personnel have more than seventy-five (75) years' experience in the siting and development of independent power projects in the Commonwealth and across the United States – to support and manage the design, development and construction of the Facility. The Facility will meet a demonstrable need for

electric generation within the applicable service area. It will utilize natural gas, an inherently clean fuel, and apply best available control technology ("BACT") to limit air emissions. The Facility will operate as an independent merchant power plant supplying wholesale electricity to markets in Virginia and elsewhere. Accordingly, the Facility constitutes an exempt wholesale generator ("EWG") as defined by the Public Utility Holding Company Act of 1935. The Facility will not engage in the retail sale of electricity, provide retail electric service to customers within the Commonwealth, or be included in the rate base of any public service company whose rates are regulated pursuant to Chapter 10 of Title 56 of the Virginia Code. CPLLC is not, therefore, an electric utility whose rates are regulated under Code § 56-585.1, *et seq.* (the "Virginia Electric Utility Regulation Act" or "Act").

As the testimony and evidence submitted with this Application will show, the construction and operation of the Facility: (i) will have no material adverse effect upon the reliability of electric service provided by any regulated public utility; (ii) is required by public convenience and necessity; and (iii) is not otherwise contrary to the public interest. The Facility will also comply with current and anticipated environmental regulations and will enhance economic development within Virginia while promoting achievement of the objectives of the Commonwealth Energy Policy.

APPLICATION

1. Applicant

CPLLC is a limited liability company organized and operating under the laws of the Commonwealth of Virginia, with offices located in Herndon, Virginia. CPLLC is a special purpose entity formed in 2016 for the purpose of developing, constructing, owning and operating a 1,650 MW electric generating facility in Charles City County (to-wit: the Facility). CPLLC has

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contracted with Balico to support and manage development of the Facility; Balico has retained the services of numerous individuals, formerly associated with a major independent power company, who, collectively, have more than seventy-five (75) years' experience with the design, development, engineering, construction and operation of electric generation facilities. These include generation facilities located within the Commonwealth of Virginia and generation projects located throughout the United States and in other countries.

Development of the Facility will be financed by Chickahominy Partners, LLC ("Chickahominy Partners"), a Virginia Limited Liability Company formed in 2016 to lead investment activities associated with the Facility. Development of the Facility is also supported by **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]**. CPLLC's contracts, affiliation and relationships with Chickahominy Partners, Balico and other entities provide the Company with the expertise, experience and resources to ensure successful completion of the Facility.

2. **Counsel**

The business address of the Applicant and any principal corporate officer(s), director(s) partner(s) or LLC member(s) of the Applicant is:

Irfan K. Ali, Managing Member
Chickahominy Power, LLC
13640 Cedar Run Lane
Herndon, Virginia 20171

All service or correspondence concerning this Application should be directed to counsel for the Applicant:

John K. Byrum, Jr.
J. Walton Milam, III
WOODS ROGERS PLC
901 East Byrd Street, Suite 1550
Richmond, Virginia 23219
Phone: (804) 343-5027
Facsimile: (804) 343-5021
jbyrum@woodsrogers.com
wmilam@woodsrogers.com

3. **Testimony and Evidence**

CPLLC submits the information required by 20 VAC 5-302-20 appended hereto as Exhibit 1 to the Application.

CPLLC submits the written direct testimony of Irfan K. Ali, Managing Member of CPLLC, attached as Exhibit 2; Mr. Ali's testimony supports the Application generally and sponsors all of Exhibit 1, with the exception of Sections 12(a)-(m), as described below.

Additionally, CPLLC submits the written testimony of Bruce A. Reese, P.E., attached hereto as Exhibit 3; Mr. Reese's testimony addresses permitting issues and the environmental impacts of the Facility and sponsors Section 12(n) of Exhibit 1.

4. **Confidential Information**

The Application and supporting testimony and materials contain information withheld from public disclosure on the ground that it contains trade secrets, privileged, or confidential commercial or financial information ("Confidential Information") as defined by Rule 5 VAC 5-20-170 of the Commission's Rules of Practice and Procedure. Pursuant to said Rule, CPLLC files this Application and accompanying Confidential Information, ***UNDER SEAL***, and has previously filed a Motion for Protective Order and accompanying proposed Protective Order, establishing procedures to govern the handling of Confidential Information contained in the Application and/or

accompanying testimony and evidence, as well as any Confidential Information which may be produced during discovery or introduced into evidence at any hearing in this matter.

5. **The Proposed Facility**

Project Site. The site of the proposed Facility ("Project Site") consists of two parcels of property identified as Charles City County Tax Map # 8-1 (Parcel A) and # 8-2 (Parcel B) located on the south side of Chambers Road (State route 685), approximately 3,700 feet east of its intersection with Roxbury Road (State route 106) in Charles City County, Virginia. The facility is located at approximately 37.436183° N latitude and 77.154831° W longitude (37° 26' 10.26" - 77° 09' 17.39"). The Project Site surrounds the existing Dominion Virginia Power Chickahominy Substation and is traversed by 230 kilovolt ("kV") and 500 kV transmission circuits utilizing the Substation. An existing 16-inch natural gas transmission pipeline owned by Virginia Natural Gas ("VNG") traverses the Project Site. Balico holds a three-year option to purchase the Project Site from its current owners and has assigned its rights to exercise such option to Chickahominy Partners which, in turn, has assigned its rights to CPLLC. CPLLC plans to exercise its right to purchase the Project Site upon closing of construction financing for the Facility.

On October 14, 2016, the Charles City County Board of Supervisors ("Board") approved the assignment of Special Use Permit No. SUP-0202015 ("Permit") from prior permit-holder New Lexington, LLC to Balico and its affiliates, CPLLC and Chickahominy Partners. On December 7, 2016, the Board approved modification of the Permit to authorize construction/operation of a 1,650 MW power project on the Project Site.

Major Systems. A detailed description of the Facility's major systems, configuration and expected suppliers of major components is provided in Section 8(a) of Exhibit 1. The Facility will consist of three single-shaft, combined-cycle electrical generation units, with a net total nominal

generating capacity of approximately 1,650 MW at 95 degrees Fahrenheit ambient temperature. Each unit will consist of a natural gas-fired combustion turbine generator ("CTG") with a downstream, natural gas supplementally-fired heat recovery stream generator ("HRSG"). The steam produced in the HRSG will be used to power a steam turbine generator ("STG") to provide additional power output and increased thermal cycle efficiency.

CPLLC seeks the option to install either of the following combustion turbines: **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]** to supply each unit's power island, consisting of a combustion turbine, steam turbine and HRSG ("Power Island"). The proposed heavy-duty combustion turbines represent the latest in combustion turbine technology and are designed for shorter startup time and higher turndown. Facility combustion turbines will be fired by natural gas and equipped with low nitrogen oxide ("NOx") burners. The combustion turbines will also be furnished with evaporative-inlet air cooling to lower inlet air temperature during periods of high ambient temperature.

Steam turbine generators will be provided by the combustion turbine manufacturer as a component part of the respective Power Island. Steam turbines will have a nominal generating capacity of approximately 220 MW (depending upon the manufacturer selected and ambient operating conditions) and will be single-shaft turbines, with a high-pressure/intermediate-pressure ("HP/IP") turbine and a low-pressure ("LP") turbine discharging to the main condenser. Main stream will enter the HP turbine and will exit back to the cold-reheat section of the HRSG. Hot reheat will enter the IP section of the turbine and will exhaust to the LP section. Each HRSG will be located downstream of the associated combustion turbine to capture the heat of turbine exhaust for use in stream production. HRSGs will be triple-pressure reheat design and will include a natural gas-fired duct burner to increase streaming capacity. Each HRSG will also be equipped with

superheating, reheating and economize sections to enable the highly efficient removal of heat from the combustion turbine gas stream and achieve a low stack gas temperature.

Air Emissions Control Equipment. NOx emissions from each of the combined cycle combustion turbines and associated duct-fired HRSGs will be controlled by dry, low-NOx burners in the combustion turbines, with selective catalytic reduction ("SCR") in the HRSGs. SCR equipment will be supplied with ammonia from an aqueous ammonia storage tank located on site. The aqueous ammonia storage tanks will contain nineteen percent (19%) aqueous ammonia, which will be vaporized and routed to the ammonia-injection grid located upstream of the SCR catalyst section of each HRSG. An oxidation catalyst section located within each HRSG will reduce the quantity of carbon monoxide ("CO") and volatile organic compounds ("VOC") exiting the stack. Particulate matter and sulfuric acid emissions are minimized by the use of pipeline quality natural gas as fuel.

Fuel. Acquisition of natural gas production and arrangements for delivery to the Facility will be provided by an independent fuel manager. The fuel gas supply system for the Facility will receive pipeline quality natural gas from the gas supplier's pipeline interface location, situated on site. Pipeline quality natural gas will be metered, regulated, heated and delivered to the combustion turbine as the primary Facility fuel. There are no incremental interstate natural gas pipelines currently related to the Facility; however, **[BEGIN CONFIDENTIAL]** [redacted]

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[redacted] **[END CONFIDENTIAL]** A detailed description of the fuel supply arrangement for the Facility is included in § 9 of Exhibit 1.

Water Consumption/Supply. Primary water consumption will be for makeup to the cooling tower. Water will be used secondarily for cycle makeup and will be demineralized by an onsite demineralization system. The Facility anticipates receiving raw water from the James River. Water will be pumped to a clarifier by raw water transfer pumps and chemicals will be added as necessary to properly condition the water and precipitate suspension of solids. Solids recovered by this process will be intermittently blown down and collected for disposal; clarified water will be supplied to the service water treatment system from the raw water supply and treatment system.

Potable water for water fixtures, sanitary system and showers will be provided by an onsite well. Sanitary sewage generated at the Facility will be discharged into an onsite septic system. Water treatment drains, oil/water separator effluent and other miscellaneous Facility drains will flow to a Wastewater Collection Sump and, along with cooling tower blowdown, will be discharged, after treatment, via the James River outfall.

6. **Technical/Financial Fitness to Construct, Operate, Maintain Facility**

CPLLC is a special-purpose entity organized for the purpose of developing, constructing and operating the proposed Facility. As indicated, above and discussed in Exhibit 1, Balico has an extensive history of providing energy management and energy infrastructure development services to industrial, commercial and utility company clients in locations throughout the United States and across the world. Balico's Managing Partner has been involved in independent power projects since 1984 and the company has retained the services of numerous individuals, formerly associated with a major independent power company, **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]**, who, collectively, have more than seventy-five (75) years' experience

with the design, development, engineering, construction and operation of electric generation facilities. These include generation facilities authorized and operating within the Commonwealth of Virginia:

- *Hopewell Cogen* – a 110 MW solid-fueled cogeneration facility located in Hopewell, Virginia. Hopewell Cogen began commercial operation in 1987 and continues in-service within PJM-DOM;

- *James River Genco* – a 110 MW solid-fueled cogeneration facility located in Portsmouth, Virginia. James River Genco began commercial operation in 1988 and retired from service in 2015; and

- *Spruance Generating* – a 220 MW solid-fueled cogeneration facility located in Richmond, Virginia. Spruance Generating began commercial operation in 1992.

Additionally, Balico personnel have been involved in generation projects located throughout the United States and in other countries, including:

- *Lumberton* – a 35 MW solid-fueled cogeneration facility located in Lumberton, North Carolina. This facility began commercial operation in 1985;

- *Elizabethtown* – a 35 MW solid-fueled cogeneration facility located in Elizabethtown, North Carolina. This facility began commercial operation in 1985;

- *Kenansville* – a 35 MW solid-fueled cogeneration facility located in Kenansville, North Carolina. This facility began commercial operation in 1986;

- *Roxboro* – a 55 MW solid-fueled cogeneration facility located in Roxboro, North Carolina. This facility began commercial operation in 1987;

- *Southport* – a 110 MW solid-fueled cogeneration facility located in Southport, North Carolina. This facility began commercial operation in 1987;

- *Rocky Mount* – a 110 MW solid-fueled cogeneration facility located in Rocky Mount, North Carolina. This facility began commercial operation in 1990;

- *River Road* – a 250 MW natural gas-fueled generation facility located in Vancouver, Washington. This facility began commercial operation in 1997;

- *Rathdrum* – a 270 MW natural gas-fueled generation facility located in Rathdrum, Idaho. This facility began commercial operation in 2001;

- *San Pedro* – a 300 MW oil-fueled generation facility located in San Pedro de Macoris, Dominican Republic. This facility began commercial operation in 2002;

- *Green Country* – a 812 MW natural gas-fueled combined cycle generation facility located in Southhaven, Mississippi. This facility began commercial operation in 2003;

- *Caledonia* – a 812 MW natural gas-fueled combined cycle generation facility located in Caledonia, Mississippi. This facility began commercial operation in 2003;

- *Plains End II* – a 115 MW natural gas-fueled reciprocating engine generation facility located in Golden, Colorado. This facility began commercial operation in 2008; and

- *Alamosa* – a 30 MW concentrating photovoltaic solar generation facility located in the San Luis Valley in Colorado. This facility began commercial operation in 2012.

Chickahominy Partners will lead the investment required to develop the Facility; development is also supported by **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]**

7. **Environmental Impact, Effect on Economic Development**

Environmental Impact. The Project site originally was owned by Dynegy, Inc. ("Dynegy") for power generation development. CPLLC has entered onto a purchase and sale agreement ("Purchase Agreement") to acquire the Project Site, as well as all environmental, permitting and associated investigations and materials. *See, e.g.* April 2001 Phase I Environmental Assessment Report, Chickahominy Development Site Project, Charles City County, Virginia, performed by Duke Engineering and Services, Inc. for Dynegy, Inc.; *see also* July 2001 Cultural Resources Investigation of the Chickahominy Tract, Charles City County, Virginia, performed

Brockington and Associated, Inc. For Dynegy, Inc. (copies filed herewith on CD entitled "Supporting Documents" ("CD")). Since acquiring control of the Project Site, CPLLC has engaged Legacy Engineering, P.C. ("Legacy") to review the Phase I Environmental Assessment and Cultural Resources Assessment to ensure that no changes have occurred that could be material to the findings of these investigations. To that end, Legacy coordinated a new Environmental Assessment through Angler Environmental. That assessment was completed in July 2017, and constitutes the most recent, accurate description of the potential impacts of the construction of the power plant construction, its cooling water intake and discharges, as well as the effects, if any, upon the ±10 miles of waterline from the intake on the James River to the Project site. The Angler report reinforces previous reports, while updating appropriate field observations. *See* Supplemental Exhibit 5, July 2017, Environmental Assesment Prepared by Angler Environmental. CPLLC has also retained the services of AECOM of Chelmsford, Massachusetts to prepare the permit materials required for the Facility under the Clean Air Act and Virginia law. *See* February 2017 Air Permit Application , Chickahominy Combined-Cycle Power Plant Project, Charles City County, Virginia (copy enclosed herewith on CD).

To satisfy the requirements of 20 VAC 5-302-20, Section 12(m), Legacy has investigated the geology, mineral resources and any caves or sinkholes that may exist on the Project Site and found the construction area suitable for the Facility, subject to final geotechnical and foundation recommendations. With regard to 20 VAC 5-302-20, Section 12(n), the Facility is not anticipated to results in any significant incremental impact upon existing transportation infrastructure. The Virginia Department of Transportation ("VDOT") will review the Charles City County Site Plan amendment requirements to be developed and submitted for VDOT approval in connection with the Facility.

Effect upon Economic Development. Construction and operation of the Facility will provide substantial economic benefits to Charles City County, the surrounding area, and the Commonwealth. In addition to increased individual and corporate tax revenues, the Facility will augment the economic vitality and stability of the region. Facility construction is expected to take approximately 29-30 months. CPLLC anticipates that a workforce of approximately 800-1,000 workers will be required during the peak construction period. Additionally, approximately 35-40 full-time employees will be required to operate and maintain the Facility on an ongoing basis. All of these temporary construction workers and full-time operational employees will provide both direct and indirect economic benefit to the Charles City County region. *See, e.g.* Application of Doswell Limited Partnership, Case No. PUE-2015-00127, Final Order entered June 1, 2016 (finding that the proposed Doswell Facility was likely to "produce economic benefits in terms of jobs, taxes and revenues"); Application of Green Energy Partners/Stonewall LLC, Case No. PUE-2013-00104, Final Order entered May 13, 2014 (finding that "the Project is likely to produce significant economic benefits in terms of jobs, taxes and revenues"); Application of CPV Warren, LLC, Case No. PUE-2002-00075, Final Order entered March 13, 2003 (finding that the proposed facility is not contrary to the public interest as it would provide economic benefit to the region).

While the proposed Facility will provide substantial economic benefit to Charles City County and the surrounding area, CPLLC and Chickahominy Partners bear all of the financial risk associated with the project. Moreover, because the Facility will be a wholesale merchant power provider, the costs of construction and operation will not be borne by Virginia ratepayers.

8. **Effect upon Reliability of Electric Service**

CPLLC will operate as an EWG, selling electricity from the Facility to other suppliers for resale. It will, therefore, be subject to Federal Energy Regulatory Commission ("FERC")

jurisdiction as to the reasonableness of its rates and charges. As the Commission has recognized, such wholesale rates are exclusively governed by FERC under 16 U.S.C. §§ 824(b) and 824d (the "Federal Power Act").

The Facility will have no material adverse impact upon the reliability of electric service provided by any regulated public utility. PJM is in the process of completing its Feasibility Study ("Feasibility Study" or "Study") which will assess the practicality and cost of incorporating the Facility capacity into the Dominion Virginia Power owned transmission system. It is expected that the Feasibility Study will be completed by March 31, 2017. The Feasibility Study will evaluate the Facility to determine compliance with applicable reliability planning criteria promulgated by PJM, the North American Electric Reliability Corporation ("NERC") and NERC Regional Reliability Councils and Transmission Owners. CPLLC expects that the Study will not identify any potentially deleterious effects upon the network by either the Facility's 500 kV or 230 kV options included in the Study. As part of the Feasibility Study process, Dominion Virginia Power ("Dominion") will assess the impact of the Facility's injection of 1,650 MW of capacity into the transmission system for compliance with NERC Reliability Criteria on Dominion's transmission system. The results of such assessment are expected to show no significant deficiencies identified for each of the categories examined. Further, as part of its generation impact analysis, Dominion will evaluate the effect that a proposed new generation resource will have under maximum generation conditions, stress system conditions, and import/export system conditions. The results of these studies are expected to indicate that the proposed interconnection will not adversely impact Dominion's import or export capability.

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9. **Public Interest**

The construction and operation of the Facility will promote the public interest by providing significant economic benefit to the Commonwealth of Virginia and to Charles City County and the surrounding area in terms of jobs, revenues and enhanced merchant generating resources.

The Facility supports the Goals of the 2010 and 2014 Virginia Energy Plan by providing much-needed generating capacity located within the Commonwealth. The 2010 Virginia Energy Plan sought to increase in-state production of energy by twenty percent (20%) through 2020. *See* 2010 Virginia Energy Plan at § 8-1. The 2014 Plan reasserted this goal and explained that "Virginia utilities must add generation (or reduce demand) by over 14,000 megawatts of new generation capacity by 2024 to keep up" with anticipated future electric demand in their service territories. See 2014 Virginia Energy Plan at §§ 2-13, 2-14.

The Facility will assist in meeting the rising demand for electricity in the region by using environmentally responsible generation technology to add much-needed energy to the electric market through PJM. *See* Case No. PUE-2015-00127, Report of Michael D. Thomas, Hearing Examiner, filed May 3, 2016, at 12. As an in-state resource, the proposed 1,650 CPLLC Facility will improve reliability in the region and its economic benefits will be realized and retained in the Commonwealth. Between 2011 and 2020, approximately 28,000 MW of capacity is expected to be retired from the PJM system. When such retirements occur, they will result in declining reserve margins that will need to be met by new generation. As an efficient, gas-fired combined-cycle generator, the Facility is expected to realize a low-levelized cost of energy relative to other technologies and to produce low-cost power that will benefit Virginia consumers. The low emission rate of the Facility compared to coal-fired generation will help Virginia comply with future emissions regulations while helping to fill the void left by the more than 2,700 MW of coal-

fired generation currently scheduled for retirement. For these reasons, the Facility will not adversely impact the reliability of electric service but will enhance the competitive market for wholesale electricity in the region which, in turn, will enhance the goal of competition in the Commonwealth.

10. **Statutory Basis for Certificate**

The Virginia Electric Utility Regulation Act provides, in pertinent part, that:

> [t]he Commission shall permit the construction and operation of electrical generating facilities in Virginia upon a finding that such generating facility and associated facilities (i) will have no material adverse effect upon reliability of electric service provided by any regulated public utility . . ., and (iii) are not otherwise contrary to the public interest.

§ 56-580 D Code of Virginia (1950), as amended. The Act provides that:

> [w]henever the Commission is required to approve the construction of any electrical utility facility, it shall give consideration of the effect of that facility on the environment and establish such conditions as may be desirable or necessary to minimize adverse environmental impact . . . . In every proceeding under this subsection, the Commission shall receive and shall give consideration to all reports that relate to the proposed facility by state agencies concerned with environmental protection; and if requested by any county or municipality in which the facility is proposed to be built, to local comprehensive plans that have been adopted pursuant to Article 3 (§ 15.2-223, *et seq.*) of Chapter 22 of Title 15.2.

§ 56-46.1 A Code of Virginia (1950), as amended. Further:

> [i]n order to avoid duplication of governmental activities, any valid permit or approval required for an electrical generating plant and associated facilities issued or granted by a federal, state or local government entity charged by law with responsibility for issuing permits or approvals regulating environmental impact and mitigation of adverse environmental impact or for other specific public interest issues such as building codes, transportation plans, and public safety, whether such permit or approval is granted prior to or after the Commission decision, shall be deemed to satisfy the requirements of this section with respect to all matters that (i) are governed by the permit or approval or (ii) are within the authority of, and were considered by, the governmental entity in issuing such permit or approval, and the Commission shall impose no additional conditions with respect to such matters.

§ 56-46.1 A Code of Virginia (1950), as amended; *cf.* § 56-580 D Code of Virginia (1950), as amended. The Code also directs the Commission to consider the effect of a proposed facility upon economic development in Virginia and states that:

> [a]dditionally, the Commission (a) shall consider the effect of the proposed facility on economic development within the Commonwealth, including but not limited to furtherance of the economic and job creation objectives of the Commonwealth Energy Policy set forth in §§ 67-101 and 67-102, and (b) shall consider any improvements in service reliability that may result from the construction of such facility.

§ 56-6.1 Code of Virginia (1950), as amended. Similarly, Code § 56-596 provides that "[i]n all proceedings pursuant to [the Act], the Commission shall take into consideration, among other things, the goal of economic development in the Commonwealth." § 56-596 A Code of Virginia (1950), as amended.

This Application, CPLLC's prefiled direct testimony, and the information and materials provided pursuant to 20 VAC 5-302-20 establish that the Facility will have no adverse effect upon the reliability of electric service provided by any regulated public utility. The Facility will operate as EWG providing wholesale power to the PJM system. CPLLC expects that the Feasibility Study will indicate that the Facility will comply with all applicable reliability planning criteria and will not have a deleterious impact upon the network regardless of whether CPLLC elects to construct either the 500 kV or 230 kV generation options. Dominion Virginia Power is in the process of assessing the Facility for compliance with NERC Reliability Criteria on Dominion's transmission system, and expects to find that the Facility fully complies with such criteria and, indeed, will enhance system reliability.

The prima facie evidence also shows that the construction and operation of the Facility will not harm but, rather, will promote the public interest. The Facility will confer significant benefits on Charles City County and the surrounding region in terms of increased employment, higher

revenues and enhanced economic activity. It will help meet rising demand for electricity in the region and across the Commonwealth and will do so with in-state generation in compliance with the objectives of the Commonwealth Energy Policy.

As described in the materials accompanying the Application and the prefiled Direct Testimony of Bruce A. Reese, the Facility is designed to minimize potentially adverse environmental impacts. The Environmental Assessment performed regarding the Project Site (copy enclosed on CD), contains analyses, evaluations and reports regarding each component of the Facility and demonstrates that the Facility will comply with all applicable environmental laws and regulations. CPLLC has or will apply for any permits required by state or federal agencies with oversight responsibility regarding any aspect of the Facility and such agencies are involved and will continue to be engaged in the regulatory review of the Facility.

WHEREFORE, for the foregoing reasons, CPLLC prays that the Commission will grant its Application, issue a CPCN authorizing construction and operation of the Facility, and grant such further or other relief as the Commission deems necessary or appropriate to effect the intent of this Application.

Respectfully submitted,
CHICKAHOMINY POWER, LLC

By: _____

Dated: August 24, 2017

John K. Byrum, Jr. (VSB #38090)
J. Walton Milam, III (VSB #89406)
Woods Rogers PLC
Riverfront Plaza, West Tower
901 East Byrd Street, Suite 1550
Richmond, Virginia 23219
804-343-5027; fax 804-343-5021
jbyrum@woodsrogers.com
wmilam@woodsrogers.com

Counsel for Chickahominy Power, LLC

Exhibit 1

Responses to 20VAC5-302-20.

General Information, Electric Generating Facility Information and Documents to Be Included in Applications for (I) Electric Generating Facilities Greater Than 50 Mw and (II) Renewable Energy Electric Generating Facilities with Rated Capacities Greater Than 100 Mw.

1. **Legal name of the applicant as well as any trade name.**

   The legal name of the Applicant is Chickahominy Power, LLC ("CPLLC" or "Applicant"). CPLLC does not have a trade name.

2. **A description of the applicant's authorized business structure, identifying the state authorizing such structure and the date thereof, e.g., if incorporated, the state and date of incorporation; if a limited liability company, the state issuing the certificate of organization and the date thereof.**

   CPLLC is a limited liability company organized under the laws of the Commonwealth of Virginia. CPLLC was formed on June 26, 2016. CPLLC is registered to transact business in the Commonwealth of Virginia.

3. **Name and business addresses of all principal corporate officers and directors, partners, and LLC members, as appropriate.**

   The business address for CPLLC and CPLLC's Managing Member is 13640 Cedar Run Lane, Herndon, Virginia 20171. **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]**

4. **Financial information for the applicant, or principal participant or participants in the project. If the applicant or principal participant or participants is a private entity, financial information should include an analysis of the entity's financial condition and audited financial statements for the two most recent fiscal years. If the applicant or principal participant or participants is a public company, financial information should include the entity's most recent stockholder report and most recent Securities and Exchange Commission Form 10-K.**

   CPLLC was formed for the purpose of developing, constructing, owning and operating a 1,650 MW electric generating facility in Charles City County, Virginia (the "Facility"). CPLLC is a private company that was formed in 2016 and does not yet have audited financial statements. CPLLC is an affiliate of Chickahominy Partners, LLC ("Chickahominy Partners") also formed

in 2016 for the purpose of leading the investment activities for developing the Facility. Such Facility development activities are being supported by **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]**.

5. Prefiled testimony in support of the application.

The Prefiled Direct Testimony of Irfan K. Ali is attached as Exhibit 2 to the Application. The Prefiled Direct Testimony of Bruce A. Reese, P.E. is attached as Exhibit 3 to the Application.

6. A discussion of the applicant's qualifications, including:

a. A summary of other projects developed and managed by the applicant. Include location, status, and operational history.

CPLLC is a special-purpose entity organized solely to manage the development, construction, ownership and operation of the proposed Facility. CPLLC has contracted with Balico, LLC ("Balico") to support and manage all development related activities for this project. Balico has retained the services of several individuals, formerly with a major independent power company, which have collectively over 75 years of experience in the development and construction of similar generation facilities.

Generation projects located in Virginia that individuals working for Balico were directly involved include:

- Hopewell Cogen - 110 MW solid fueled cogeneration facility located in Hopewell, Virginia. This facility entered commercial operation in 1987 and continues in service within PJM Interconnection, LLC. ("PJM").

- James River Genco - 110 MW solid fueled cogeneration facility located in Portsmouth, Virginia. This facility entered commercial operation in 1988 and retired from service in 2015.

- Spruance Generating - 220 MW solid fueled cogeneration facility located in Richmond, Virginia. This facility entered commercial operation in 1992.

Generation projects located throughout the United States that individuals working for Balico were directly involved include:

- Lumberton - 35 MW solid fueled cogeneration facility located in Lumberton, North Carolina. This facility entered commercial operation in 1985.

- Elizabethtown - 35 MW solid fueled cogeneration facility located in Elizabethtown, North Carolina. This facility entered commercial operation in 1985.

- Kenansville - 35 MW solid fueled cogeneration facility located in Kenansville, North Carolina. This facility entered commercial operation in 1986.

- Roxboro - 55 MW solid fueled cogeneration facility located in Roxboro, North Carolina. This facility initially entered commercial operation in 1987.

- Southport - 110 MW solid fueled cogeneration facility located in Southport, North Carolina. This facility initially entered commercial operation in 1987.

- Rocky Mount - 110 MW solid fueled cogeneration facility located in Rocky Mount, North Carolina. This facility initially entered commercial operation in 1990.

- River Road - 250 MW natural gas fueled generation facility located in Vancouver, Washington. This facility initially entered commercial operation in 1997.

- Rathdrum - 270 MW natural gas fueled generation facility located in Rathdrum, Idaho. This facility initially entered commercial operation in 2001.

- San Pedro - 300 MW oil fueled generation facility located in San Pedro de Macoris, Dominican Republic. This facility initially entered commercial operation in 2002.

- Green Country - 812 MW natural gas fueled combined cycle generation facility located in Jenks, Oklahoma. This facility initially entered commercial operation in 2002.

- Quachita - 812 MW natural gas fueled combined cycle generation facility located near West Monroe, Louisiana. This facility initially entered commercial operation in 2003.

- Southaven - 812 MW natural gas fueled combined cycle generation facility located in Southaven, Mississippi. This facility initially entered commercial operation in 2003.

- Caledonia - 812 MW natural gas fueled combined cycle generation facility located in Caledonia, Mississippi. This facility initially entered commercial operation in 2003.

- Plains End II - 115 MW natural gas fueled reciprocating engine generation facility located in Golden, Colorado. This facility initially entered commercial operation in 2008.

- Alamosa - 30 MW concentrating photovoltaic solar generating facility located in the San Luis Valley of Colorado. This facility initially entered commercial operation in 2012.

b. A detailed description of the organizational structure of the applicant. Include the division of ownership, if applicable.

As stated above, Balico has been retained by CPLLC to develop the project. Balico is managed by its Managing Member **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]** Irfan K. Ali who has been involved with Independent Power Projects since 1984. Balico has, in turn, retained the services of several seasoned executives **[BEGIN CONFIDENTIAL]** [redacted], **[END CONFIDENTIAL]** that collectively have over 70 years of experience in the Independent Power sector. These executives are engaged as a team with each individual responsible for their specific area of expertise and all reporting to Balico.

c. A description of any affiliation or affiliations with an incumbent electric utility as defined in § 56-576 of the Code of Virginia.

None.

7. Specific information about the site for the proposed facility, including:

a. A written description of the location including identification of the city or county in which the facility will be constructed. Such description should be suitable for newspaper publication and be sufficient for identification of affected areas.

The facility is located on the south side of Chambers Road (state route 685), approximately 3,700 feet east of its intersection with Roxbury Road (state route 106) in Charles City County, Virginia. The facility is comprised of two parcels, identified as tax map parcels 8-1 (Parcel A) and 8-2 (Parcel B). The facility is located at approximately 37.436183° N latitude and 77.154831° W longitude (37° 26' 10.26" -77° 09' 17.39"). The property surrounds the existing VEPCO (d/b/a Dominion Virginia Power) Chickahominy substation on Chambers Road.

b. A description of the site, and a depiction on topographic maps of the proposed site.

The site surrounds the existing Dominion Virginia Power Chickahominy Substation and is itself traversed by both 230 kV and 500 kV transmission circuits that utilize the substation.

The site is also traversed by the existing 16 inch natural gas transmission pipeline owned by Virginia Natural Gas ("VNG"), a wholly owned subsidiary of AGL Resources. A VNG compressor station abuts the site on the east.

The topography of the site is level to gently rolling. [maps to be provided when available]

c. The status of site acquisition (i.e., purchase option, ownership, etc.).

Balico, holds a three year option to purchase the site from the current owners and has assigned its rights to Chickahominy Partners which, in turn, has assigned its rights to CPLLC. CPLLC anticipates exercising the option to purchase the land at financial closing of the construction financing for the project.

d. A description of any applicable local zoning or land use approvals required and the status of such approvals.

The Charles City County Board of Supervisors approved rezoning request #REZ-02-2015 on May 28, 2015 requested by New Lexington, LLC for the subject property from Agricultural (A-1), General Business (B-1) and Light Industrial (M-1) to Heavy Industry (M-2).

The Charles City County Board of Supervisors approved Special Use Permit #SUP-02-2015 on May 28, 2015 requested by New Lexington, LLC for the construction of a 1000 MW natural gas power plant.

The Charles City County Board of Supervisors approved the assignment of Special Use Permit #SUP-02-2015 on October 14, 2016 from New Lexington, LLC to Balico and its affiliated entities, CPLLC and Chickahominy Partners, as Developer of a proposed 1,650 MW power project.

The Charles City County Board of Supervisors approved the modification to Special Use Permit #SUP-02-2015 on October 25, 2016 to allow an increase in acceptable site boundary sound levels from 55 decibels to 85 decibels.

The Charles City County Board of Supervisors approved the modification to Special Use Permit #SUP-02-2015 on November 22, 2016 to allow a 1,650 MW power project.

8. Specific information about the proposed facility, including:

a. Description of all major systems, facility configuration and expected suppliers of major components.

Overall Facility Description

The Facility will consist of three, one-on-one single-shaft, combined cycle electrical generation units, with a net total nominal generating capacity of approximately 1,650 MW at 95° Fahrenheit ambient temperature. Each unit will consist of a natural gas-fired combustion turbine generator ("CTGs") with a downstream natural gas supplementally-fired heat recovery steam generator ("HRSGs"). The steam that is generated in the HRSGs will be used in a steam turbine generator ("STG") for additional power output and increased thermal cycle efficiency.

Combustion Turbines

CPLLC is seeking the option to install either of the following combustion turbines: **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]** to supply the power island. Each power island consists of a combustion turbine, steam turbine, and HRSG. These heavy-duty turbines represent the latest in combustion turbine technology. These machines are designed for a shorter startup time and higher turndown. Combustion turbines will be fired with natural gas, and will be furnished with low Nitrogen oxide ("NOx") burners. The combustion turbines will be furnished with evaporative inlet air cooling to lower the inlet air temperature during periods of high ambient temperature.

Steam Generation

Each HRSG will be located downstream of the associated gas turbine to capture the heat of the turbine exhaust for steam production. Each HRSG is a triple-pressure with reheat design, and it is anticipated that it will be provided by the combustion turbine manufacturer as part of the power island. Each HRSG will include a natural gas-fired duct burner to increase steaming capacity. Each HRSG will be furnished with superheating, reheating, and economizer sections required to achieve a highly efficient removal of heat from the combustion turbine gas stream, and achieve a low stack gas temperature.

Air Emissions Control Equipment

NOx emissions from each of the combined cycle combustion turbines and associated duct-fired HRSGs will be controlled by dry low-NOx burners in the combustion turbines, with

selective catalytic reduction ("SCR") in the HRSG. The SCRs will be supplied with ammonia from an aqueous ammonia storage tank, located on site. The ammonia storage tank will contain 19% aqueous ammonia, which will be vaporized and routed to the ammonia injection grid located upstream of the SCR catalyst section in each HRSG. An oxidation catalyst section located within each HRSG will reduce the quantity of carbon monoxide ("CO") and volatile organic compounds ("VOCs") exiting the stack. Particulate matter and sulfuric acid emissions are minimized by the use of pipeline quality natural gas as fuel.

Steam Turbine Generator

The power island steam turbine generator will be provided by the combustion turbine manufacturer as part of the power island. Each steam turbine will have a nominal generating capacity of approximately 220 MW (depending on the manufacturer selected and ambient operating conditions), and will be a single shaft turbine with a high pressure/intermediate pressure turbine and low pressure ("LP") turbine discharging to the condenser. Main steam will enter the High Pressure ("HP") turbine, and will exit back to the cold reheat section of each HRSG. Hot reheat will enter the Intermediate Pressure ("IP") section of the turbine, and will exhaust to the LP section of the turbine.

Steam Cycle Makeup and Feed water Systems

Steam cycle makeup will be introduced to the cycle through the condenser as demineralized water. Raw water is anticipated to be received from the James River and will be filtered, treated and stored on site. The Boiler Feedwater System provides water to the HP and IP economizers and LP drum of each HRSG. The Boiler Feedwater System also supplies water for fuel gas performance heating and desuperheaters as required.

Auxiliary Boiler

The auxiliary boilers provides backup steam to the Facility during unit outage periods and provides steam for turbine and piping warmup, HRSG warmup, and condenser vacuum maintenance. There will be three auxiliary boilers, each with a nominal capacity of 30,000 lb/hr with a natural gas-fired low NOx burner.

Fuel Supply

The Fuel Gas Supply System will receive pipeline quality natural gas from the gas supplier's pipeline interface location, located on the site. The Fuel Gas will be metered, regulated, heated, and delivered to the combustion turbine as the primary fuel.

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Water Treatment

The primary water consumption will be for makeup to the cooling tower. Secondarily, water will be used for cycle makeup, which will be produced onsite by a demineralization system. Raw water is anticipated to be received from the James River. The raw water is pumped to the clarifier by the raw water transfer pumps. Chemicals are added as necessary to properly condition the water and precipitate suspended solids. Solids formed from the physical-chemical process are intermittently blown down and collected for disposal. Clarified water is supplied to the service water treatment system from the raw water supply and treatment system.

Potable Water

Potable water will be supplied by a well to be located on the project site. Potable water will be used for sanitary fixtures, hand washing, and for showers.

Waste Water Collection and Treatment

Sanitary sewage generated on the site will be discharged into an onsite septic system. Water treatment drains, oil/water separator effluent, and other miscellaneous Facility drains will flow to a Wastewater Collection Sump and along with cooling tower blowdown will be forwarded to the James River outfall.

Fire Protection

The Fire Protection Water Supply System provides water for site and equipment fire protection. Fire protection water is supplied from the service/fire water storage tank. An electric motor driven pump and backup diesel engine driven pump will furnish fire water from the service/fire water storage tank. Hydrants and fixed spray nozzles will be located to produce full stream coverage of all site structures.

Enclosed Structures

Enclosed structures consist of the Administration/Warehouse Building, Water Treatment Enclosure, and Cooling Tower Chemical Feed Enclosure. The Turbine Enclosure will be a conventional steel braced frame structure. The remaining structures will likely be pre-engineered metal buildings. Buildings will be furnished with heating, ventilating and air conditioning systems (as required), lighting and electrical power. Buildings will be designed and constructed in accordance with all applicable laws and regulations of the federal government and applicable state and local codes and ordinances.

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Lighting

Illumination for roadways, parking areas, and other outdoor Facility yard areas shall be provided. Where structures for mounting the light fixtures are not available, lighting poles shall be provided.

Control and Information Systems

The objective of the control and information systems is to facilitate plant operations by ensuring personnel safety, equipment protection, adequate operation, and plant availability. These functions will be provided by a microprocessor-based Distributed Control System ("DCS"). The DCS shall employ functional distribution and redundancy to achieve a high level of system reliability. System control strategies shall be implemented using software programmable, digital computing techniques. Control of the balance-of-plant equipment shall be through the DCS. Stand-alone programmable logic controllers ("PLCs") or proprietary microprocessor-based systems will interface with the DCS for supervisory control, alarm, and trending purposes.

b. Nameplate capacity, gross dependable capacity, net dependable capacity and expected seasonal heat rates.

Reference is made to the "Air Permit Application for the Chickahominy Combined-Cycle Power Plant Project, Charles City County, Virginia" (the "Air Permit") prepared by AECOM and dated February 2017 filed with the Virginia Department of Environmental Quality on February 20, 2017 which includes process descriptions for generating capabilities for equipment under consideration for the Project. A copy of the air permit is included on the Compact Disk ("CD") filed herewith titled "Supporting Materials")

c. Estimated costs, and schedule for construction, testing and commercialization.

Construction of the proposed Facility is currently targeted to begin in the first quarter of 2018. The following table provides estimated milestone dates that are associated with the construction, testing and commissioning of the Facility. The CPCN related dates are subject to the Commission's approval of this Application.

Milestones	Dates
Receive CPCN	3Q2017

Enter PJM Capacity Auction for 2020/2021	2Q2017
Commence Construction	1Q2018
Commence Commissioning	1Q2020
Commercial Operation	2Q2020

CPLLC asks that the Commission waive any requirement to provide cost-related information or, alternatively, that cost-related information be treated as Confidential and Extraordinarily Sensitive Information. Without waiving its request to forego providing cost-related information, CPLLC anticipates the cost of the Facility to be approximately **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]**.

9. A description of the fuel supply arrangement for the proposed facility. The description should detail:

a. Fuel type, quality and source or sources.

Natural gas of standard pipeline quality, received from various production basins in the United States and transported through interstate natural gas pipelines, and delivered by local natural gas distribution company infrastructure.

b. Transportation and fuel storage arrangements for fuel delivery.

Acquisition of natural gas production and arrangements for its transportation and delivery to the plant location will be performed by an independent fuel manager.

c. Identification of all new pipeline facilities, if any, needed to serve the proposed facility.

There are no incremental interstate natural gas pipeline facilities directly related to the proposed Facility. **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]**

d. Ownership of any such facilities.

[BEGIN CONFIDENTIAL] [redacted] **[END CONFIDENTIAL]**

e. Plans for constructing such facilities.

[BEGIN CONFIDENTIAL] The incremental firm distribution capacity is part of an expansion project planned for the existing VNG gas infrastructure, which includes the company's Joint Use Pipeline and VNG Lateral Pipeline. [END CONFIDENTIAL]

f. The location and routing of any such facilities.

[BEGIN CONFIDENTIAL] [redacted] [END CONFIDENTIAL]

g. The size of such facilities.

[BEGIN CONFIDENTIAL] [redacted] [END CONFIDENTIAL]

h. Whether such facilities will be utilized to provide or enhance fuel supplies to other entities.

[BEGIN CONFIDENTIAL] [redacted] [END CONFIDENTIAL]

i. Identification of the pipeline or gas distribution company and the rate schedule the applicant intends to utilize in order to serve the proposed generating facility. Identification of whether the service is firm or interruptible.

[BEGIN CONFIDENTIAL] [redacted] [END CONFIDENTIAL]

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m. Identification of the proposed in-service date of any facilities to be constructed.

[BEGIN CONFIDENTIAL] [redacted] [END CONFIDENTIAL]

n. In general terms, description of the availability of fuel supplies required to serve the proposed facility.

[BEGIN CONFIDENTIAL] [redacted] **[END CONFIDENTIAL]** These interstate natural gas pipelines provide access to natural gas production areas that include the Texas / Mid Continent, Gulf Coast, Appalachian, Marcellus Shale, and Utica Shale regions. The Potential Gas Committee estimates that there is 2,853 trillion cubic feet ("TCF") of total available future natural gas supplies from these production areas. See Potential Gas Committee, Potential Gas Committee Reports Increase in Magnitude of U.S. Natural Gas Resource Base,(available at http://www.potentialgas.org/press-release/).

10. A discussion of economic impacts (both positive and negative), of the project. The discussion should address the tax and employment implications of the project.

The Facility will have a significant positive impact on the local economy. For example, the Facility is expected to provide substantial local and regional benefits from highly efficient electric generation, adding hundreds of millions of dollars in private infrastructure investment in Virginia, and providing substantial annual property taxes once operational.

The Facility construction is anticipated to take approximately 29-30 months. At peak construction approximately 800-1000 workers will be on site. During operation, the Facility will require approximately 35-40 full-time employees. Jobs during construction and operation would deliver millions of dollars in payroll and have significant indirect economic benefits both locally and regionally in Virginia.

11. A list of other local, state or federal government agencies whose requirements must be met in connection with the construction or operation of the project and a statement of the status of the approval procedures for each of these agencies.

Charles City County

- Special Use Permit & Land Rezoning Approval - a Special Use Permit (#SUP-02-2015) and Land Rezoning (#REZ-02-2015) from Charles City County regarding the site was approved by the Charles City County Board of Supervisors on May 28, 2015. SUP-02-

2015 was subsequently amended by the Charles City County Board of Supervisors on October 14, 2016, October 25, 2016 and November 22, 2016 (See Section 7-d).

- Water Quality Impact Assessment ("WQIA") - CPLLC is working with Charles City County to determine if WQIA is needed for the site.

- The Facility will also need various other approvals from Charles City County, that will be applied for at the appropriate time, including: land disturbance approval, site plan approval, building and structure permits, potable water and septic plans, erosion and sediment control plan, and a storm water management plan. (All the above approvals were granted by Charles City County in 2002 for a power plant proposed on the current site. This earlier project was not pursued due to market circumstances that existed at that time).

Federal Aviation Administration determinations and approvals

- FAA notice for stack construction is targeted for submitted in March, 2017.

Federal Energy Regulatory Commission

- CPLLC intends to file for Exempt Wholesale Generator ("EWG") status from the Federal Energy Regulatory Commission and for market-based rate authorization for wholesale sales of electric energy, capacity and ancillary services. These FERC filings will occur prior to generating power from the Facility.

Environmental

- A list of government agencies and the status of approvals whose requirements must be met in connection with the environmental impacts of the Facility are addressed in response to item 12 below, which is incorporated herein by reference.

12. An analysis of the environmental impact of the project shall be provided sufficient to enable the commission to make the determinations required by §§ 56-46.1 and 56-580 D of the Code of Virginia.

This analysis shall include, but is not limited to, the impacts on the environment and natural resources, analysis of alternatives considered, unavoidable adverse impacts, mitigation measures proposed to minimize unavoidable impacts, and any irreversible environmental changes. The information required by this subdivision shall be submitted to the Department of Environmental Quality, simultaneously with its filing with the commission, for coordination and review by state agencies responsible for environmental and natural resource protection.

Reference is made to the Environmental Assessment summary letter prepared by Legacy Engineering, P.C. dated February 22, 2017, along with the associated Phase I Environmental Assessment Report, prepared by Duke Engineering & Service, Inc., dated April 2001; the Cultural Resources Investigation, prepared by Brockington and Associates, Inc., dated 2001; the Erosion and Sediment Control Plan, prepared by Black & Veatch, dated March 2002; the Stormwater Drainage Narrative, prepared by Black & Veatch, dated March 2002; and portions of the Preliminary Geotechnical Report, prepared by Law Engineering, dated September 9, 2001 for applicable required information and analysis regarding the proposed Project's possible environmental impacts. These documents are contained on the CD attached herewith titled Supporting Documents. In addition, Angler Environmental has prepared a new Environmental Assessment, dated July 2017 ("2017 EA"), updating previous reporting. This updated 2017 EA was filed in this docket on August 16, 2017 as Supplemental Exhibit 5 to the Application. Specific required information follows.

The information shall identify:

a. **Required air permits, expected restrictions, expected emissions, rates of emissions, and any needed emissions offsets or allowances.**

   A separate Air Permit Application, Chickahominy Combined-Cycle Power Plant Project, Charles City County, Virginia dated February 2017, prepared AECOM of Chelmsford, Massachusetts, its supporting documentation and required fees submitted to the Virginia Department of Environmental Quality ("DEQ").

b. **Required permits for water withdrawals, expected restrictions, the amount of water estimated to be used, the source of such water, identification of a backup source of water, if any, and identification of any facilities that need to be constructed to provide such water.**

   Water withdrawal and discharge permits will be pursued separately through DEQ. The source of water will be the James River. Preliminary meetings and discussions have been held with the DEQ on the project, expected water supply requirements and planned infrastructure to deliver water to the Project site.

c. **Required permits for water discharge and potential impacts on regional water flows.**

   Water withdrawal and discharge permits will be pursued separately through DEQ. The source of water will be the James River. Preliminary meetings and discussions were held with the DEQ on the project, expected water discharge requirements and planned infrastructure to deliver discharged water from the Project site.

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d. Required permits related to the wetlands and an identification of any tidal and nontidal wetlands located near the proposed site and how such wetlands will be impacted by applicant's proposed facility.

Wetlands were identified on site, but in locations which will not require impact. Elsewhere within the overall project area, including the water intake and waterline path, a total of 14.46-acre of potentially jurisdictional Waters Of the United States were identified, including:

- +/- 0.83 acre of Palustrine Open Water ("POW")

- +/- 1.94 acre of Palustrine Emergent ("PEM") Wetlands

- +/- 0.05 acre of Palustrine Scrub-Shrub ("PSS")

- +/- 10.77 acre of Palustrine Forested ("PFO") Wetlands

- +/- 0.87 acre / 3,306 LF of stream ("R3" and "R4") channel

- +/- 1,622 LF of Tidal Riverine ("R1")

As noted above, the southern project area is situated along the tidal James River and along the shoreline of the cove. The southern project area also supports the only identified PSS stand and POW area within the project limits. Palustrine forested wetlands comprise most of the wetlands identified within the overall project area. Wetlands and streams in the southern project area are largely associated with the James River, Eppes Creek, and Kimages Creek. Wetlands and streams in the northern project area are associated with Turkey Island Creek to the west and West Run and Possum Run to the east[1]. If impact is eventually required, the Company will apply for a permit pursuant to § 62.1-44.15:20 of the Code of Virginia and Section 401/404 of the Clean Water Act.

e. Impact of solid and hazardous wastes on local water resources.

Solid and hazardous waste during construction will be addressed through the Virginia Stormwater Management Program ("VSMP") Stormwater Pollution Prevention Plan ("SWPPP").

Ongoing operations following construction will accommodate waste elimination through appropriate collection, transfer, and disposal in legal landfills.

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[1] *See* Supplemental Exhibit 5, July 2017, Environmental Assessment Prepared by Angler Environmental, p. 3.

f. Impact on natural heritage resources, and on threatened and endangered species.

Of the eight threatened, or endangered species that were identified as potentially existing within or near the project site, the prospective impact was determined to be negligible or could be avoided by imposing certain time-of-year restrictions on construction activities. In all cases, appropriate steps will be taken to avoid or minimize impacts and to coordinate timely application for whatever state/ federal permits may be required.

g. Erosion and sediment control measures.

Development of the Facility will be in complete conformance with the requirement of Charles City County, which is obligated to enforce the Erosion & Sediment Control Handbook, current State Water Control Law, and provisions of the Virginia Administrative Code dealing with runoff within the Commonwealth.

h. Archaeological, historic, scenic, cultural, or architectural resources in the area.

Circa ~ Cultural Resource Management, LLC ("Circa") completed a database review and field reconnaissance to identify the likely presence of historic properties listed, or eligible for listing, on the National Register of Historic Places ("NRHP") or on the Virginia Landmarks Register ("VLR") within or near the project site. Circa's study also included the review of previous cultural resources assessments, which have been conducted by others on the generation facility site (Brockington and Associates, Inc. in 2001) and a substantially similar waterline alignment corridor (Archaeological Consultants of the Carolinas, Inc. in 2016) for a separate gas-fired electric generation facility being proposed in the vicinity of the subject project.

In general, the Circa study did not reveal any significant issues associated with cultural resources, as it pertains to the proposed development. Additional shovel testing and metal detecting will likely be required on the generation facility site and along the waterline corridor, depending on the exact limits of disturbance, but the study noted the waterline is unlikely to adversely affect any architectural resources, as the utility will be buried.

i. Chesapeake Bay Preservation Areas designated by the locality.

Aspects of the project will involve land disturbance within Resource Protection Areas ("RPAs") and Resource Management Areas ("RMAs") on the project site. Installation of the water intake and outfall structures along the James River may require impacts within the RPA. Water intakes and discharges are considered water-dependent facilities and are allowable uses within the RPA, provided their use does not conflict with the comprehensive

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plan, minimizes disturbance within the RPA, and all non-water dependent components of the project are located outside of the RPA. Impacts within the RPA for construction access and installation of the intake and outfall structures will be limited to only that which is necessary to install the structures.

The existing and future land use in this area is agricultural, and the installation of intake and outfall structures will not change the agricultural use of the property. The waterline will cross within RPA and RMA features identified throughout the corridor. Based on Section 4-17 of the Charles City County CWPO, water lines are among the linear utilities exempt from the Chesapeake Bay Preservation Act ("CBPA") requirements provided the installation of the line occurs outside RPA areas to the greatest extent practicable; land disturbance is limited to the minimum necessary for installation; construction, installation, and maintenance of the utility will comply with all applicable state and federal requirements and permits; the utility is designed and constructed in a manner that protects water quality; and all land disturbance exceeding 2,500 linear feet will comply with a county approved erosion and sediment control plan. The waterline will be installed using a combination of directional drilling and trenching within the existing roadway rights of way and will avoid RPAs to the greatest extent practicable. Land disturbance associated with the waterline will be limited to only that which is necessary for installation and will adhere to a county approved erosion and sediment control plan. Thus, the waterline should be exempt from CBPA requirements.

Construction of the generation facility is expected to occur outside of the RPA and should not be subject to the requirements of the CBPA. CPLLC will work to avoid disturbance impacts in this area.

All land disturbing activities of the project will adhere to a county approved erosion and sediment control plan, as well as a stormwater management plan to minimize construction impacts within RPAs and RMAs. Prior to development of the site, a site-specific delineation of the RPA will be completed and submitted to the county for approval. If necessary, a Water Quality Impact Assessment that details the RPA/RMA impacts, and the proposed best management practices to mitigate these impacts, will also be submitted to and approved by the county prior to construction.[2]

j. Wildlife resources.

The subject site contains an assortment of wildlife typically associated with active farming and wooded suburban areas. The wooded areas will not be disturbed during or after

[2] *Id.* at p. 9

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construction, leaving those habitats intact. The area proposed for the plant is currently being farmed, so that fauna will naturally relocate to adjoin portions of the property. Except for a narrow access road, wildlife corridors will be maintained.

k. Agricultural and forest resources and federal, local, state or private parks and recreation areas.

No federal, local, state or private parks and recreation areas will be impacted with this project. A small portion of the currently farmed area will be converted to the power plant, but the remaining portions of the property will likely continue to be contract-farmed.

l. Use of pesticides and herbicides.

No pesticides or herbicides will be used in association with this project.

m. Geology and mineral resources, caves, and sinkholes.

The geology of the specific area of the larger site identified for Project construction was evaluated and found to be suitable for the Facility, subject to final geotechnical and foundation recommendations.

n. Transportation infrastructure.

No significant incremental impacts on existing transportation infrastructure is anticipated. The Virginia Department of Transportation will review the Charles City County Site Plan to be developed and submitted for approval in connection with the Project.

13. A general discussion of reliability impacts including:

a. A description of transmission interconnection requirements and needed interconnection facilities.

The site surrounds the existing Dominion-Virginia Power Chickahominy substation. CPLLC has initiated the Large Generator Interconnection Application process with PJM and Dominion-Virginia Power and anticipates that the Facility will interconnect to Dominion-Virginia Power's transmission system at either the 500 kV or 230 kV voltage levels at the Chickahominy substation.

b. A description of the potential impact of the proposed facility on the interconnected transmission system. Discussion should identify and summarize any system impact studies or proposed studies.

The Applicant submitted an Interconnection Application to PJM on October 25, 2016. The Facility is identified as number AC1-107 in the PJM queue. The Facility is subject to the PJM Large Generator Interconnection tariff and to Dominion-Virginia Power's generator interconnection requirements. A pre-feasibility kickoff meeting was held with PJM and Dominion Virginia Power representatives on November 15th. During this meeting, Dominion representatives did not identify any specific interconnection issues associated with their Chickahominy Substation, into which the Project plans to connect. PJM anticipates the completion of its feasibility study, which assesses the practicality and cost of incorporating the Facility's capacity into the PJM system (the "Feasibility Study"), by the end of March 2017. The PJM Feasibility Study evaluates the Facility for compliance with applicable reliability planning criteria (PJM, NERC, NERC Regional Reliability Councils, and Transmission Owners) and is not expected, based on initial discussions with Dominion-Virginia Power representatives, to identify any potential network impacts regarding the 500 kV option or a 230 kV option.

As part of the Feasibility Study, Dominion-Virginia Power will assess the impact of the Facility's injection of 1,650 MW of Capacity and Energy into Dominion-Virginia Power's transmission system, for compliance with NERC Reliability Criteria on Dominion-Virginia Power's transmission system. The result of these assessments is expected to conclude "no deficiencies identified" for each of several studied categories.

Moreover, as part of its generation impact analysis, Dominion-Virginia Power evaluates the impact that a proposed new generation resource will have under maximum generation conditions, stress system conditions and import/export system conditions. The results of these import and export studies are expected to indicate that the proposed interconnection will not impact Dominion-Virginia Power's import or export capability.

c. A description of anticipated services (ancillary services, re-dispatch, energy imbalance, etc.) that may be provided to any transmission service provider.

No additional services are anticipated at the time of this Application.

d. A discussion of existing and expected generation reserves in the region and the impact of the proposed facility on such reserves.

There have been a great amount of generation retirements between 2013 and 2015, which have reduced the PJM capacity reserves. The project will contribute to PJM's ability to meet

capacity needs by increasing the capacity reserve. The Project will provide a consistent, reliable source of power that will support the PJM transmission system.

Between 2011 and 2020, approximately 28,000 MW of PJM's capacity is expected to retire, which may result in shrinking reserve margins that must be met by new generators such as CPLLC.[3] According to the 2014 Virginia Energy Plan, over 14,000 MWs of new generation capacity is required by 2024 in Virginia alone to keep pace with robust demand growth that exceeds the balance of the PJM electricity market.[4] Virginia currently has approximately 26,000 MWs of net summer electric generating capacity, comprised of 37% natural gas, 2.1% coal, 16% hydroelectric/pumped storage, 14% nuclear, and 9% petroleum fired-sources.[5] As an efficient new natural gas-fired combined cycle generator, CPLLC is expected to realize a low levelized cost of energy relative to other technologies and produce low-cost power that will benefit Virginia consumers.[6]

The low emissions rate of the Facility vs. coal and existing natural gas generators should help Virginia comply with any future emissions mandates such as the proposed Clean Power Plan and together with renewables can help to fill a void left by retiring coal-fired generation (approximately 2,700 MW of Virginia coal-fired generation is scheduled for retirement).[7] Furthermore, "Virginia utilities do not own in-state generation capacity sufficient to meet their territory's peak load plus the reserve required by the Federal Energy Regulatory Commission ("FERC")."[8] As an in-state resource located close to the load that it serves, the 1,650 MW CPLLC Facility will improve reliability, with its economic benefits retained instate.

14. A discussion of whether the proposed facility is not contrary to the public interest. The discussion shall include, but is not limited to, an analysis of any reasonably known impacts the proposed facility may have upon reliability of service to, and rates paid by, customers of any regulated public utility for service in the Commonwealth, including water service, gas distribution service, electric distribution service, and electric transmission service.

The following provisions support a finding that the Facility is not contrary to the public interest:

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[3] PJM, "2016 State of the Market Report for PJM: January through June," August 2016. Section 12, Page 480.

[4] Virginia Department of Mines, Minerals and Energy, "Virginia Energy Plan," October 2014. Section 2, Page 14.

[5] United States Energy Information Administration ("EIA"), "Virginia State Electric Profile," released March 24, 2016 for 2014. https://www.eia.gov/electricity/state/Virginia.

[6] *Id.*, Section 2, Page 13.

[7] *Id.*, Item 8, Page 84.

[8] *Id.*, Section 2, Page 10.

- The Charles City County Board of Supervisors has approved a special use permit ("SUP") to locate up to a 1,650 megawatt combined cycle natural gas power plant on the site.

- The SUP imposes 29 conditions concerning, among other things: construction activities, maintenance activities, site plan approval, building and structure permits, inspections, lighting, entrance ways, parking areas, dust, security fencing, signage, landscaping, fences, traffic management, erosion and sediment control, stormwater management, water usage, noise, and safety.

- Construction and operation of the Facility will provide substantial economic benefits to Charles City County, the surrounding area, and the Commonwealth. In addition to increased individual and corporate tax revenues, the Facility will augment the economic vitality and stability of the region. Facility construction is expected to take approximately 29-30 months. CPLLC anticipates that a workforce of approximately 800-1,000 workers will be required during the peak construction period. Additionally, approximately 35-40 full-time employees will be required to operate and maintain the Facility on an ongoing basis. All of these temporary construction workers and full-time operational employees will provide both direct and indirect economic benefit to the Charles City County region. *See, e.g.* Application of Doswell Limited Partnership, Case No. PUE-2015-00127, Final Order entered June 1, 2016 (finding that the proposed Doswell Facility was likely to "produce economic benefits in terms of jobs, taxes and revenues"); Application of Green Energy Partners/Stonewall LLC, Case No. PUE-2013-00104, Final Order entered May 13, 2014 (finding that "the Project is likely to produce significant economic benefits in terms of jobs, taxes and revenues"); Application of CPV Warren, LLC, Case No. PUE-2002-00075, Final Order entered March 13, 2003 (finding that the proposed facility is not contrary to the public interest as it would provide economic benefit to the region).

- While the proposed Facility will provide substantial economic benefit to Charles City County and the surrounding area, CPLLC and Chickahominy Partners bear all of the financial risk associated with the project. Moreover, because the Facility will be a wholesale merchant power provider, the costs of construction and operation will not be borne by Virginia ratepayers.

- The Facility will have no material adverse effect on the reliability of electric service provided by any regulated public utility. PJM is completing a Feasibility Study which will assess the practicality and cost of incorporating the Facility's capacity into the PJM system. PJM has indicated that the study will be completed by the end of March 2017. The PJM Feasibility Study will evaluate the Facility for compliance with applicable

reliability planning criteria (PJM, NERC, NERC Regional Reliability Councils, and Transmission Owners) and identify any potential network impacts regarding the 500 kV option or a 230 kV option. As part of the PJM Feasibility Study process. Dominion-Virginia Power will assess the impact of the Facility's injection of 1,650 MW Capacity and Energy into Dominion-Virginia Power's transmission system, for compliance with NERC Reliability Criteria on Dominion-Virginia Power's transmission system. The result of these assessments are expected to conclude "no deficiencies identified" for each of several studied categories. Moreover, as part of its generation impact analysis, Dominion-Virginia Power will evaluate the impact that a proposed new generation resource will have under maximum generation conditions, stress system conditions and import/export system conditions. The results of these import and export studies are expected to indicate that the proposed interconnection will not impact Dominion-Virginia Power's import or export capability.

- The Facility supports the 2010 and 2014 Virginia Energy Plan goals by providing required generating capacity located in the Commonwealth. The 2010 Virginia Energy Plan established a goal to increase in-state production of energy by 20 percent through 2020. See, 2010 Virginia Energy Plan at 8-1. The 2014 Virginia Energy Plan reasserted this need for additional generation to serve Virginia utilities "Virginia utilities must add generation (or reduce demand) by over 14,000 megawatts of new generation capacity by 2024 to keep up" with anticipated future electric demand in Virginia utilities service territories. See, 2014 Virginia Energy Plan at 2-13, 2-14.

- The Facility will help Virginia meet the rising demand for electricity, using environmentally responsible electric generation technology, by adding needed energy to the electric energy market through PJM. Application of Doswell Limited Partnership, Case No. PUE-2015-00127, Final Order entered June 1, 2016 (finding that the proposed Doswell Facility was likely to "produce economic benefits in terms of jobs, taxes and revenues").

- As an in-state resource, the 1,650 MW CPLLC Facility will improve reliability and its economic benefits will be retained in the Commonwealth of Virginia. Between 2011 and 2020 approximately 28,000 MW of capacity is expected to have been retired in PJM, which may result in shrinking reserve margins that will need to be met by new generators such as CPLLC. As an efficient new natural gas-fired combined cycle generator, CPLLC is expected to realize a low levelized cost of energy relative to other technologies and produce low-cost power that will benefit Virginia consumers. The low emissions rate vs. coal and existing natural gas generators should help Virginia comply with any future emissions mandates such as the proposed Clean Power Plan and together with renewables can help to fill a void left by retiring coal-fired generation

(approximately 2,700 MW of Virginia coal-fired generation is scheduled for retirement). Furthermore, "Virginia utilities do not own in-state generation capacity sufficient to meet their territory's peak load plus the reserve required by the Federal Energy Regulatory Commission ("FERC")." [See, supporting footnotes 1-6 *supra*.]

- The Facility will enhance the competitive market for wholesale electricity in the region. "[C]ompetition is benefited by the construction and operation of generation that is owned or controlled by a company other than an incumbent electric Utility . . . . [S]uch capacity has a desirable effect on competition." *See*, Application of CPV Warren, LLC, Hearing Examiner's Report (Nov. 25, 2002); *see also* Application of Tenaska, Order at 15 (Jan. 16, 2002), finding that "the proposed facility should help develop wholesale competition in the region which, in turn, should help advance the goal of competition in the Commonwealth."

- The Facility will be designed, constructed and operated in a way to minimize any adverse environmental impact as more fully described in the Environmental Assessment provided in response to Section 12 above.

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